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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/890,306	10/25/2001	Murali Nayudu	13377-002001	8939

7590

09/04/2003

Fish & Richardson
225 Franklin Street
Boston, MA 02110-2804

EXAMINER

KRUSE, DAVID H

ART UNIT	PAPER NUMBER
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1638

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DATE MAILED: 09/04/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/890,306

Applicant(s)

NAYUDU ET AL.

Examiner

David H Kruse

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-72 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☐ Claim(s) ____ is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☒ Claim(s) 1-72 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Restriction is required under 35 U.S.C. §§ 121 and 372.

This application contains the following inventions or groups of inventions, which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR § 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group I, claim(s) 1, 2 and 5-13, drawn to a method of treating a fungal infection in an animal comprising administering a sugar acid.

Group II, claim(s) 1-23, drawn to a method of treating a fungal infection in a plant comprising administering a sugar acid.

Group III, claim(s) 24-27, drawn to an isolated biocontrol agent for the treatment of a fungal infection.

Group IV, claim(s) 28-35, drawn to a phytoprotective composition for the treatment of a fungal infection of a non-aquatic plant.

Group V, claim(s) 36-40, drawn to a composition for the treatment of a fungal infection in a human or other mammal.

Group VI, claim(s) 41-47, drawn to a method of producing a sugar acid using a bacterial cell.

Group VII, claim(s) 48-52, 67-70 and 72, drawn to an isolated nucleic acid molecule encoding a sugar oxidase, a method of enhancing the tolerance of a plant to infection by a fungal pathogen comprising expressing said isolated nucleic acid molecule and a plant transformed with said nucleic acid molecule.

Group VIII, claim(s) 53-59, 66 and 71, drawn to an isolated nucleic acid molecule encoding an enzyme involved in the PQQ synthesis pathway.

Group IX, claim(s) 60-65, drawn to a method of producing a sugar acid comprising expressing an isolated nucleic acid encoding a sugar oxidase in a cell.

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Group X, claim(s) 66, drawn to a method of producing a sugar acid comprising expressing an isolated nucleic acid encoding a sugar oxidase in a cell and at least one other nucleic acid encoding an enzyme involved in the PQQ synthesis pathway.

Claims 1, 2 and 5-13 are generic to Groups I and II and will be examined to the extent that said claims read on the elected invention.

2. The inventions listed as Groups I-X do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: In the instant case the different methods, Groups I, II, VI, VII, IX and X, have different method steps, different starting materials and different end products, in addition, the protective compositions of Groups IV and V do not require the use of an isolated nucleic acid and can be synthesized by other methods. Therefore, the inventions of Groups I-X do not relate to a single general inventive concept because they lack the same special technical feature.

3. In addition, **Applicant is required to elect** one nucleic acid sequence from SEQ ID NOs. 2-6 to be examined in conjunction with the election of any one of Groups VII-X. The Patent and Trademark Office recently published its policy for the examination of patent applications that claim large numbers of nucleotide sequences in the Official Gazette, 1192 O.G. 68 (November 19, 1996). Nucleotide sequences encoding different proteins are structurally distinct chemical compounds and are unrelated to one another. These sequences are thus deemed to normally constitute independent and distinct inventions within the meaning of 35 U.S.C. § 121. Absent evidence to the contrary, each such nucleotide is presumed to represent an independent and distinct invention, subject to a restriction requirement pursuant to 35 U.S.C. § 121 and 37 CFR § 1.141. In establishing the new policy, the Commissioner has partially waived the requirements of 37 CFR § 1.141 et seq. and permits a reasonable number of such nucleotide sequences to be claimed in a single application. It has been determined that normally ten sequences constitute a reasonable number for examination purposes. The Official Gazette Notice of November 19, 1996 is one that permits the examiner to waive restriction to no more than one invention. Since 1996, databases and resource allocations at the PTO have changed and the examination of 10 sequences on the merits in the instant application would present a burden on PTO resources. Additionally, it is noted that one nucleotide and one amino acid sequence is within the O.G. notice range of "up to ten" sequences. This election is not to be construed as an election of species.

4. Applicant is advised that the reply to this requirement to be complete within one month (not less than 30 days) must include an election of the invention to be examined even though the requirement be traversed (37 CFR § 1.143).

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5. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR § 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 § CFR 1.48(b) and by the fee required under 37 § CFR 1.17(i).

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David H. Kruse, Ph.D. whose telephone number is (703) 306-4539. The examiner can normally be reached on Monday to Friday from 8:00 a.m. to 4:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dr. Amy Nelson can be reached at (703) 306-3218. The fax telephone number for this Group is (703) 872-9306 Before Final or (703) 872-9307 After Final.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group Receptionist whose telephone number is (703) 308-0196.

A handwritten signature in black ink, appearing to read "David H. Kruse". The signature is fluid and cursive, with the first name "David" being more prominent.

David H. Kruse, Ph.D.
29 August 2003